REMARKS/ARGUMENTS

Reconsideration of this application is requested. Claims 82-112 are in the case.

I.   THE INTERVIEW

At the outset, the undersigned wishes to thank the Examiner (Mr. Lu) for kindly agreeing to conducting a telephone interview in this application. The interview was held on December 2, 2005 and was attended by Dr. Brett Cowan, one of the co-applicants, and by the undersigned. The courtesies extended by the Examiner were most appreciated. The substance of the interview will be clear from the comments presented below.

II.   ANTICIPATION REJECTION

Claims 38-41, 43-53, 55-65 and 67-74 stand rejected under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent 6,102,466 to Sheehan et al. That rejection is respectfully traversed.

By way of background, Dr. Cowan explained that the focus of the present invention is to provide to a user a largely manual selection of guide points for the purposes of refining a reference model. As claimed, the present method is directed to assessing one or more characteristic(s) of an organ or part thereof from multiple images acquired of the organ or part thereof, including forming a fit between a reference model of the geometric shape of the organ or part thereof and a series of acquired images of the organ or part thereof by a series of user interactive steps which consist essentially of:

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defining the spatial position of at least two of the acquired images,

forming an initial fit between the reference model and the acquired images by displaying one or more of the acquired image(s) to a user,

manually user defining one or more reference markers on the acquired image(s), and initially fitting the model to the acquired image(s) by reference to the reference markers on the image(s),

displaying to a user an acquired image of the subject organ or part thereof, the image including at least one organ boundary derived from the intersection of a surface of the organ with the plane of the image,

displaying to the user a representation of the initial fit of the reference model by displaying on the acquired image a representation of the intersection of the model with the plane of the image,

manually user-defining one or more reference guide points on a user-selected organ boundary on the image displayed to the user, for which the spatial positions have been defined,

converting the guide points to coordinates which define the three dimensional position of the guide points,

improving the fit of the model to the guide points to form an improved fit of the model for the organ or part,

displaying to the user a representation of the improved fit of the model by displaying on an acquired image a representation of the intersection of the improved fit of the model with the plane of the user-selected image,

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manually user-defining one or more further reference guide points on at least one further user-selected image displayed to the user, for which the spatial positions have been defined,

converting the further guide points to coordinates which define the three dimensional position of the guide points, and

further improving the fit of the model by fitting the model to said further reference guide points, to thereby form a further improved fit of the estimate model for the organ or part which enables assessing the one or more characteristic(s) from the estimate model.

A proposed amended claim similar to that presented herewith as new claim 82 was discussed with the Examiner during the interview. As noted by Dr. Cowan, an important feature of the present method is that the expertise of the user is required very early in the model-fitting process. This is to be contrasted with the Sheehan approach in which computer image processing is relied on heavily at an initial stage and the user simply corrects errors in the reference model derived by the software after extensive image processing. The present method involves the user early in guiding the fitting of the model whereas prior art methods operate relatively independently of the user and simply bring the user in to correct the initial image processing. Such systems sound superficially appealing as it would appear that little user intervention is required. In practice, if the initial images are fuzzy, as the bulk of images are, the user can spend several hours manually post editing the reference model. By contrast in the present method, the user is involved initially and a suitable fit can be achieved within 1-5 minutes. This constitutes a substantial advantage over prior art systems.
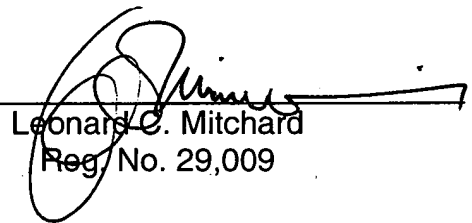
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Agreement was reached with the Examiner during the interview that the step

methodology as now claimed is not disclosed by Sheehan and that the outstanding

anticipation rejection would be withdrawn. This is reflected in the Interview Summary

Record. Such action is respectfully requested.

Allowance of the application is respectfully requested.

Respectfully submitted,

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